

TUNE, ENTREKIN & WHITE, P.C.

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AM SOUTH CENTER
SUITE 1700
315 DEADERICK STREET
NASHVILLE, TENNESSEE 37238

TEL (615) 244-2770 FAX (615) 244-2778

RECEIVED JOHN C. TUNE
1931 1983

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ERVIN M. ENTREKIN
1927-1990

T.R.A. DOCKET ROOM
of counsel

WM. THOMAS McHUGH
F. CLAY BAILEY, JR.
JOHN D. FITZGERALD, JR.

* Rule 31 listed General Civil Mediator

November 19, 2004

Via Hand Delivery Only

Tennessee Regulatory Authority
Sharla Dillon, Docket Room Manager
460 James Robertson Parkway
Nashville, TN 37243

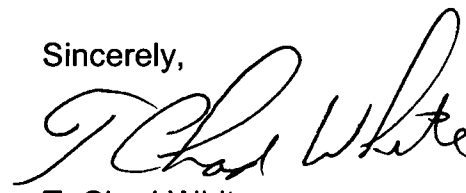
RE: Cartwright Creek, LLC - Petition to Amend CCN
TRA Docket No. 04-00358

Dear Sir/Madam:

As requested by the TRA representative assigned to the above-referenced Petition, please find attached an original and thirteen copies of the documents concerning Petitioner's operating permit regarding the area which is the subject of this Petition.

Thank you. Feel free to contact me, if anything else is needed.

Sincerely,



T. Chad White

TCW/ab
Attachments

H:\CWhite\Sheaffer (Waterbridge) 14124 01\tr TRA CCN info 11 19 04 wpd



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

JUN 08 2004

401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

Mr. Reese Smith III
President
Cartwright Creek Utility Company, Inc. - Waterbridge Development
2033 Richard Jones Road
Nashville, TN 37215

Re: State Operating Permit No. SOP-04019
Cartwright Creek Utility Company, Inc. - Waterbridge Development
Triune, Williamson County, Tennessee

Dear Mr. Smith:

Enclosed please find one copy of the draft state permit which the Division of Water Pollution Control (the division) proposes to issue. The issuance of this permit is contingent upon your meeting all of the requirements of the Tennessee Water Quality Control Act and the rules and regulations of the Tennessee Water Quality Control Board.

Also enclosed is a copy of the public notice that announces our intent to issue this permit. The notice affords the public an opportunity to review the draft permit and, if necessary, request a public hearing on this issuance process. In accordance with 1200-4-1-.05(3)(c) you must provide the public notice in one of three ways: (1) posting in the post office and in one other public place of the municipality, such as the local courthouse or city hall, that is nearest the premises in which your effluent source is located; or (2) post the notice near the entrance to your premises and in one additional place within one mile of your premises; or (3) publish the notice in a local newspaper and periodical, or in a daily newspaper of general circulation. If the notice is posted, you must then send to the division a signed and notarized affidavit identifying the locations at which the notice was posted and the dates on which the notice was in posted. If the notice is published, you must then send to the division a signed and notarized affidavit identifying the publication in which the notice was published and the date on which the notice was published. The division will not finalize the proposed permit action until the affidavit is received. For your convenience, this package contains examples of an advertisement, a publisher's affidavit and an affidavit to be used when the notice is physically posted.

If you disagree with the provisions and requirements contained in the draft permit, you have twenty-five (25) days from the date of this correspondence to notify the division of your objections. If your objections cannot be resolved, you may appeal the issuance of this permit. This appeal should be filed in accordance with Section 69-3-110, Tennessee Code Annotated. If you have questions, please contact the division's local Environmental Assistance Center at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at Hari.Akunuri@state.tn.us.

Sincerely,

Sava Ann Qualls, P. E.
Manager, Permit Section
Division of Water Pollution Control

PWAT/JS

cc. DWPC, Permit Section & EAC - Nashville

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**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL**

6th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1534

Permit No. SOP-04019

PERMIT
For the operation of Wastewater Treatment Facilities

In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

PERMISSION IS HEREBY GRANTED TO

Cartwright Creek Utility Company, Inc. - Waterbridge Development
Trume, Williamson County, Tennessee

FOR THE OPERATION OF

Effluent collection system, aerated treatment cells, storage, disinfection and spray irrigation system located at latitude 35.886111 and longitude -86.673056 in Williamson County, Tennessee. The design capacity of the system is 0.0749 MGD.

This permit is issued as a result of the application filed on March 29, 2004, in the office of the Tennessee Division of Water Pollution Control and in conformity with approved plans, specifications and other data submitted to the Department in support of the above application, all of which are filed with and considered as a part of this permit, together with the following named conditions and requirements.

This permit shall become effective on:

This permit shall expire on:

Issuance date:

Paul E. Davis
Director
Division of Water Pollution Control

CN-0759

RDAs 2352 & 2366

PART I

A. GENERAL REQUIREMENTS

The treatment system shall be monitored by the permittee as specified below:

<u>Parameter</u>	<u>Sample Type</u>	<u>Daily Maximum</u>	<u>Sampling Point</u>	<u>Measurement Frequency</u>
Flow	instantaneous		*	1/month
BOD ₅	grab	45 mg/l	*	1/quarter
Ammonia as N	grab	Report	*	1/quarter
<i>E. Coli</i>	grab	941 colonies/100 ml	*	1/quarter

* Effluent to the spray irrigation plots.

The spray fields must be fenced. A minimum chain link or 4' woven wire fence must be used. The permittee must disinfect the wastewater in order to meet the above *E. Coli* limit.

Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

This permit allows the operation of a wastewater spray irrigation system. The operation should be such that there is no contamination of and no wastewater discharge to any surface or subsurface stream because of collected pools of water called "ponding" or because of improper irrigation. Any runoff due to improper operation must be reported in writing to the Division of Water Pollution Control, Environmental Assistance Center - Nashville within 5 days of the incident. In addition, the spray irrigation system must be operated in a manner preventing the creation of a public health hazard or a public/private nuisance.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to spray irrigation plots.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

A "grab sample" is a single influent or effluent sample collected at a particular time.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded quarterly and submitted quarterly. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Pollution Control
Environmental Assistance Center - Nashville
711 R.S. Gass Boulevard
Nashville, TN 37243-1550

The first operation report is due on the 15th of the month following permit effectiveness

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Quarterly Operation Report. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

E. SCHEDULE OF COMPLIANCE

Full operational level shall be attained from the effective date of this permit.

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PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Pollution Control (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, or authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;
- b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and
- c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Pollution Control.

4. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. The permittee shall ensure that the certified operator is in responsible charge of the facility and observes the operation of the system

frequently enough to ensure its proper operation and maintenance regardless of the effluent monitoring frequency stated in the permit."

- b. Dilution water shall not be added to comply with effluent requirements

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-108-(F) The Tennessee Water Quality Control Act as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

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- a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental assistance center should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

- i. A description of the discharge and cause of noncompliance;
- ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- iii. The steps being taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Monthly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

D. LIABILITIES

1. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

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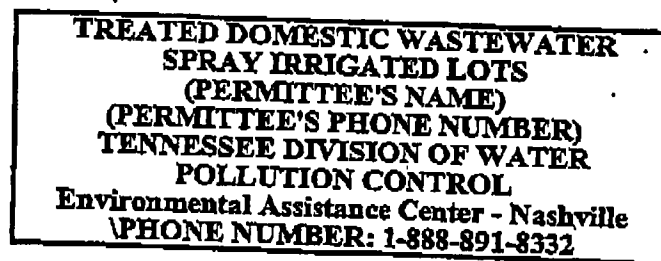
PART III OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Biological natural system operator and the collection system operated under the supervision of a Grade I Collection System certified operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at all approaches to the spray irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material and have a white background with black letters.



No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified.

C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the Division.

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street
L&C Annex, Sixth Floor
Nashville, Tennessee 37243-1534
(615) 532-0625

Public Hearing No. PH-04-010

June 3, 2004

NOTICE IS HEREBY GIVEN, the Division of Water Pollution Control will hold a public hearing pursuant to Rule 1200-4-1-.05 at:

Place: Tennessee Technological University
Pennebaker Hall Room 128
1100 North Dixie Avenue

Date: July 12, 2004

Time: 6:00 p.m.

Public comments will be received concerning the issuance of an individual NPDES Permit to:

Eagle View Poultry Farm
4754 Charlie Melton Road
Allons, Clay County Tennessee 38641
Discharging to the Obey River

The hearing officer may limit the length of oral presentation in order to allow parties the opportunity to speak, and will require that all testimony be relevant to water quality issues. Written testimony will be accepted at the hearing and for ten (10) days following the hearing, and will be considered part of the hearing record.

Interested persons may obtain additional information, a copy of the draft permit, the fact sheet, and inspect and copy forms and related documents at the Division's Central Office at the address listed above or at any of the Environmental Assistance Centers (EAC). Please call 1-888-891-8332 for the nearest EAC.

Individuals with disabilities who wish to participate in these proceedings (or to review these filings) should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such participation. Such contact may be in person, by writing, telephone, or other means and should be made no less than ten days prior to July 6, to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation, ADA Coordinator, John White, 7th Floor Annex, 401 Church Street, Nashville, TN 37243, (615) 532-0207. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298).

To complete the Public Notice:

A completed Public Notice form is being provided for you in this package. The Public Notice must be advertised/publicized for the entire 30-day draft permit comment period. This period starts when you receive your draft permit for review and ends 30-calendar days later. If your facility is a "minor" facility based on its design - effluent discharge flow, you may post the notice in two (2) places. One posted notice must be at the facility the other posted notice may be at a public venue, such as the local post office or in a county courthouse or municipal building. (Somewhere the general public has complete access to seeing the notice.) If your facility is a "major" facility based on its design - effluent discharge flow, you must advertise this public notice in a newspaper with the largest circulation in your area for one day. It is recommended that you use the example included here and have it published in a size appropriate for reading, but should not be of a size to cause undue burden of cost.

Once the 30-day public notice posting is complete or the newspaper advertisement has been published a notarized affidavit of the posting must be sent to the division. The division must receive the original, notarized, affidavit to confirm proper notification. The permit will not be issued until this affidavit is received.

Parts of the Public Notice Advertisement:

The cover page of the permit is the page with the State of Tennessee map outline on it, and below that, is the permit tracking number. This page explains the purpose of the permit: "Authorization to discharge under the National Pollutant Discharge Elimination System. Issued by Tennessee Department of Environment and Conservation, Division Water Pollution Control, 401 Church Street, 6th Floor, L & C Annex, Nashville, TN 37243-1534. Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act as amended by the Clean Water Act of 1977 (33 U.S.C. 1251. et seq.)"

Your notice may be attached with all of the necessary information already printed except for the comment period end date which you should fill in before posting or advertising. A blank Public Notice advertisement form should be completed using the data obtained from the cover page of the draft permit. (The discharger (name) as authorized to discharge (type of discharge), from the facility located (the city, county), Tennessee, to receiving waters named (river, creek, and/or tributary), Latitude and Longitude of the discharge pipe.) Include the appropriate Permit Writer's contact information. This is located on the first page of the Rationale section of the permit.

List of Permit Writers

HVA	Mr. Hari	Akunuri	615 532-0650	Hari.Akunuri@state.tn.us
SEF	Mrs. Souraya	Fathi	615 532-0485	Souraya.Fathi@state.tn.us
RLH	Mr. Robert	Halcy, III	615 532-0669	Robert.Halcy@state.tn.us
JAH	Ms. Julie	Harse	615 532-0682	Julie.Harse@state.tn.us
VMJ	Mr. Vojin	Janjic	615 532-0670	Vojin.Janjic@state.tn.us
JCM	Mr. Jim	McAdoo	615 532-0684	Jim.McAdoo@state.tn.us
WDM	Mr. Wade	Murphy	615 532-0666	Wade.Murphy@state.tn.us
PRM	Ms. Pamala	Myers	615 532-0654	Pamala.Myers@state.tn.us
EMP	Mr. Ed	Polk	615 532-1178	Edward.Polk@state.tn.us
SAQ	Mrs. Sava	Qualls	615 532-0652	Sava.Qualls@state.tn.us
MTS	Mrs. Maybelle	Sparks	615 532-0651	Maybelle.Sparks@state.tn.us
ELS	Ms. LaVerne	Swift	615 532-1175	LaVerne.Swift@state.tn.us

The following page is the Public Notice advertisement you should complete to begin the 30-calendar day public notification period. You must fill in the comment period end date before posting or advertising.

Depending on the type of posting you are required to use, the affidavit to verify that posting follows the advertisement. The *original*, notarized, affidavit must be sent directly to the central office of the Division of Water Pollution Control to complete your public notice obligation.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
PERMIT SECTION
401 CHURCH STREET
L&C ANNEX, SIXTH FLOOR
NASHVILLE, TENNESSEE 37243-1534
(615) 532-0625

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
401 CHURCH STREET
L&C ANNEX, SIXTH FLOOR
NASHVILLE, TENNESSEE 37243-1534
(615) 532-0625

WPC-PERMITS SECTION is requesting public comment on this permit action.

Applicant: **Cartwright Creek Utility Company, Inc. - Waterbridge Development**

Permit Number:	SOP-04019	Permitting Action:	New
Major Discharger:	NO		
Facility Latitude:	35.886111	Facility Longitude:	-86.673056
Location:	Williamson County Southwest of Nolensville Road and Osburn Road Triune, TN 37014		
Activity Description:	Effluent collection system, aerated treatment cells storage, disinfection and spray irrigation		
Effluent Description:	No discharge allowed from this system		
Receiving Stream:	N/A		
Permit Writer:	Mr. Hari Akumuri: (615) 532-0650 Hari.Akumuri@state.tn.us		
EAC Information:	Environmental Assistance Center- Nashville Division of Water Pollution Control 711 R.S. Gass Boulevard Nashville, TN 372431550		

Comment Period Ends:

How to Comment:

Obtaining a broad range of facts and opinions on Agency actions is one of the best ways to ensure quality decisions. Persons wishing to comment on the proposed action are invited to submit comments in writing to the Division of Water Pollution Control, 6th Floor, L&C Annex, 401 Church Street, Nashville, TN 37243, Attn: Public Notice Coordinator, by fax number (615) 532-0686, or by E-mail at ask.tdec@state.tn.us. Comments must be received by the end of comment period.

How to Request a Public Hearing:

Interested persons may request in writing that the Director of the Division of Water Pollution Control hold a public hearing on any application. The request must be filed within the comment period and must indicate significant public interest of the party(ies) filing it and the reasons why such a hearing is warranted. All hearings will be conducted according to Division of Water Pollution Control Rule 1200-4-1-.05(3)(g), and will be announced by the division through another public notice.

How the Department will proceed:

The Director of the Division of Water Pollution Control will determine the final permit action after considering comments submitted during the comment period, the hearing record, if any, and the requirements of the Federal and State acts and regulations.

To Obtain Permit Details:

Draft permits and/or decisions regarding applications submitted to TDEC may be available electronically on the TDEC Internet site: <http://www.state.tn.us/environment>. Copies of the application(s) and draft permit(s) are also available for public review by contacting TDEC at ask.tdec@state.tn.us, by calling 1-888-891-TDEC (8332), or by visiting area Environmental Assistance Centers throughout the state, and at the Central office located on the 6th Floor of the L&C Annex, 401 Church Street, Nashville, TN 37243.

Please bring this notice to the attention of persons you believe will be interested.

Newspaper Advertisement Public Notice Affidavit

To: The Tennessee Division of Water Pollution Control proposes to issue a Water Quality NPDES Permit to the following applicant who discharges to Waters of the State.

Please attach copy of newspaper ad here.

Published Affidavit

Before me, the undersigned, a Notary Public in and for said county, this day personally came _____ who being first duly sworn, according to
(Facility Representative requesting advertisement)

law, says that he/she is a duly authorized representative of _____ to request a Newspaper advertisement to
(Facility requesting the advertisement)

be published in the _____, in the city of _____
(Name of newspaper)
_____ and in the County of _____ and in the State
of Tennessee, and that the advertisement of:

(The Above)

of which the annexed is a copy, was published in said paper on the following date: _____ and that the statement of account herewith is correct to the best of his/her knowledge.

Facility Representative

Newspaper Representative

Subscribed and sworn to before me this _____ day of _____ 2004.

Notary Public (print name here);

seal

My Commission expires: _____

Building or Office Public Notice Posting Affidavit
Use for Minor Facility Posting only.

To: Tennessee Department of Environment and Conservation, Division of Water
Pollution Control

Posting: The Tennessee Division of Water Pollution Control proposes to issue a Water
Quality NPDES Permit to the following applicant who discharges to Waters of the State.

Please attach copy of posted advertisement to affidavit.

Public Notification was posted in/at the following location(s), for a 30-calendar-day time
period beginning: _____ ending: _____

(Facility Representative posting advertisement) did personally appear before me in the County of _____
in the State of Tennessee, to acknowledge that he/she
executed the foregoing instrument as a free act and for the purposes therein. Subscribed
and sworn to before me this _____ day of _____, 2004.

Notary Public (print name here): _____

scal

My Commission expires _____

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street
L&C Annex, Sixth Floor
Nashville, Tennessee 37243-1534
(615) 532-0625

Public Hearing No.04-014

August 09, 2004

NOTICE IS HEREBY GIVEN, the Division of Water Pollution Control will hold a public hearing pursuant to Rule 1200-4-1-.05 at:

Place: Triune Methodist Church, 7906 Nolensville Road, Arrington, TN 37014
Date: September 30, 2004
Time: 7:00 P.M. CST

Public comments will be received concerning the draft State Operation Permit Permit (SOP-04019) to:

Cartwright Creek Utility Company, Inc. - Waterbridge Development
Triune, Williamson County, Tennessee

Effluent collection system, aerated treatment cells, storage, disinfection and spray irrigation system located at latitude 35.886111 and longitude -86.673056 in Williamson County, Tennessee. The design capacity of the system is 0.0749 MGD.

The hearing officer may limit the length of oral presentation in order to allow parties the opportunity to speak, and will require that all testimony be relevant to water quality issues. Written testimony will be accepted at the hearing and for ten (10) days following the hearing, and will be considered part of the hearing record.

Interested persons may obtain additional information, a copy of the draft permit, the fact sheet, and inspect and copy forms and related documents at the Division's Central Office at the address listed above or at any of the Environmental Assistance Centers (EAC). Please call 1-888-891-8332 for the nearest EAC.

Individuals with disabilities who wish to participate in these proceedings (or to review these filings) should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such participation. Such contact may be in person, by writing, telephone, or other means and should be made no less than ten days prior to September 15, to allow time to provide such aid or services. Contact the Tennessee Department of Environment and Conservation, ADA Coordinator, John White, 7th Floor Annex, 401 Church Street, Nashville, TN 37243, (615) 532-0207. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298)



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Notice of Determination

Cartwright Creek Utility District, Inc.
Waterbridge Development
Triune, Williamson County, Tennessee
State Operating Permit #SOP-04019
November 10, 2004

INTRODUCTION

On March 19, 2004, the Cartwright Creek Utility District, Inc. applied for a state operating permit to provide wastewater collection and treatment services for an approximate 200 home development in Williamson County near the community of Triune. The treatment system involves the spray irrigation of 0.075 million gallons per day (75,000 gpd) of biologically treated, domestic wastewater effluent on approximately 21 acres of previously farmed land along Arrington Creek at latitude 35.886111 and longitude -86.673056. The applicant proposes biological treatment by two aerated lagoons, approximately 20 feet deep, designed by Sheaffer International, LLC.

On June 7, 2004, the division public noticed its proposal to issue the applicant a non-discharging operating permit. On August 9, 2004, the division public noticed a public hearing scheduled for September 30, 2004, in response to written request for a hearing received July 28, 2004. The hearing was requested due to concern about the suitability of the soil for the intended treatment and disposal system. The division held the public hearing at 7:00 P.M. at the Triune Methodist Church at 7906 Nolensville Pike. The public comment period for this action was open through October 15, 2004. This Notice of Determination (NOD) serves as the division's response to water quality and operational issues identified before, during and subsequent to that hearing and provides the basis for the division's permit decision.

SOIL

Many persons expressed concern regarding the site geology saying the area was a hardwood wetland prior to field drains being installed to allow farming and that the area stays wet four to five months out of the year. They contend that the disposal area will "pond."

The division also expressed concern to the developer about the site soil impermeability and low conductivity in a September 24, 2003, comment letter on the Detailed Soils Investigation Report (DSIR) and Design Development Report (DDR). In January 2004, AMEC Earth & Environmental, Inc., of Nashville published a subsequent Detailed Soil Investigation Report (AMEC File No. 03-4599-0000). The investigation utilized ten shallow-depth, field, constant head permeability tests to test the hypothesis that vertical conductivity in the clay soil is compensated by lateral flow within the soil. The report concluded, via hydraulic modeling of the subsurface water flow, that for the proposed 2.25 inches per week (0.013 in/hr) of treated wastewater requiring disposal, the combination of lateral and vertical permeability should provide adequate drainage and provide for a factor of safety as well. Additionally, the system is designed to provide up to 70 days of storage when irrigating is not feasible during periods of high rainfall or wet winter periods.

The division understands that field drains were installed to allow farming but cannot equate that to inadequate drainage for wastewater disposal. The field drains are located in a section of the field to the east of the proposed spray irrigation site and not on it. Their existence and the fact they made farming possible actually suggests something positive about the vertical and/or lateral movement of water through the soil into the drains. More importantly, management of the spray irrigation site will not require the same accessibility required to plow, plant and harvest row crops.

HYDROLOGY

Several persons expressed concerns that irrigation water would runoff into Arrington Creek contributing nutrients and possibly degrading water quality from its current conditions. They also pointed out that the site occasionally floods and either contains or drains flow from continuous springs.

Based on the above soil investigation findings, runoff should not occur if the spray irrigation site is operated properly. The system designer, Dr. Sheaffer, explained at the hearing that the automatic irrigation system will be controlled with sensors designed to prevent irrigation during rain or when wind conditions might cause aerosol drift beyond the irrigation areas. The lagoon dikes and operational controls for the system are to be constructed above the 100 year flood elevation level of the creek. The lagoon is designed with capacity to store treated wastewater on rain days and on the relatively few days per year that flooding may inundate the irrigation fields. Dr. Sheaffer stated he had studied the hydrology of the site using recorded climatic data but welcomed the opportunity to review any additional information the neighbors could provide. He also welcomed the opportunity to participate on any committee formed to study the site hydrology further.

Regarding baseline conditions of Arrington Creek, the division has assessed the creek as part of its assessments of streams state-wide. Arrington Creek (hydrologic unit code TN05130204016_0500) is currently assessed by the division as not having water quality sufficient to meet all of its designated uses due to siltation from agriculture and land development. The division's philosophy regarding these assessments places higher value on the integrity of the biology rather than on the measurement of individual pollutants. We usually do not have data on specific pollutants in sufficient quantity to draw defensible conclusions about their impact on the stream.

In this specific case, the division sees no need to allocate resources for such thorough characterization of Arrington Creek since a TMDL (total maximum daily load) implementation plan has been developed and approved for siltation in the Harpeth River Watershed. Meeting the permit conditions of the proposed permit and provisions of aquatic resource alteration permits will conform to the implementation plan in the TMDL. Aquatic resource alteration permits may be necessary for, among other activities, road and utility crossings of Arrington Creek. The TMDL may be viewed on the department webpage at:

<http://www.state.tn.us/environment/wpc/tmdl/approvedtmdl/HarpSed07.pdf>.

It is worthy to note that the previous farming operation at the site had the potential to discharge nutrient and silt laden runoff to the creek if best management practices were not strictly controlled. The spray irrigation site, once sown, should not contribute silt. It will also serve as a secondary removal mechanism for the nutrients not utilized in the biological treatment lagoon whereas the farming operation had no secondary removal mechanism for the fertilizers applied to crops.

MAINTENANCE

Several persons questioned the ability to maintain this system since there is currently not another exactly like it in the state. Another person expressed concern about operation of the collection system grinder pumps when the power is off. Conversely, another person questioned how proper operation/maintenance of the system would affect the crayfish living in countless burrows on the site.

It was pointed out that the use of lagoons for the treatment of domestic wastewater is not unique in the state and that the division has permitted a number of various type lagoon systems. The Sheaffer system is somewhat unique by its depth, the depth of the anaerobic zone of treatment at the bottom of the lagoon, and the depth of the extensive aeration between the aerobic and anaerobic zones. The equipment and controls used in the treatment process are not unique to this design. Grinder pump low pressure collection sewers are numerous throughout the state and even in Middle Tennessee. Maintenance should not be an issue so long as the permittee maintains spare parts for night and weekend repairs. This is especially true for the grinder pump systems.

Typically, homeowners dramatically reduce water usage (showers, dishwashers) when the power is off. Still, the pump tanks have the possibility of filling and possibly overflowing at some point in the homeowner's collection system whenever power is unavailable. In periods of extended power failure, the sewer service provider, Cartwright Creek Utility District, will be responsible for operating the collection system to prevent such overflows and for pumping and hauling the sewage if necessary.

Organisms such as crayfish that live in the site soil are not specifically afforded protection by the state water quality criteria. More specifically, the division does not view soils of the irrigation site as having special habitat consideration since it was recently used for farming.

DETERMINATION

Based on information obtained regarding the Sheaffer system, it has been determined that this lagoon system is capable of meeting effluent limitations better than that established by EPA for secondary treatment systems. Therefore, lower limits are proposed for the following reasons:

The proposed limitation of 45 mg/l for biochemical oxygen demand, CBOD₅, designed to prevent long-term build up of organics in the spray plot, is too high to reflect good operation of a highly aerated lagoon.

The long detention time and aeration are expected to convert almost all the ammonia in the wastewater to other forms of nitrogen.


Additionally, this lagoon is designed to remove some portion of the wastewater nitrogen. Per the engineering report entitled, *Design Development Report And Engineering Report, Waterbridge Sheaffer System, Williamson County, Tennessee, January 2004 Revision*, the anaerobic zone is designed to convert several compounds, including nitrogen, into gas, and the loading calculations in the same report conservatively assume total nitrogen of 15 mg/l in the effluent to the spray fields (even though the designer expects only half that amount in the effluent.) This represents a reduction in wastewater nitrogen as domestic wastewater would be expected to have concentrations in the range 20 to 85 mg/l. The loading calculations predict that, at the conservative levels of 15 mg/l, there will be insufficient nitrogen in the wastewater to ever exceed the ability of the spray fields to assimilate it.

A second limitation for *E. coli* is added with the notation that it will apply if wastewater is ever used for reuse purposes. Dr. Sheaffer indicated at the public hearing a hope and vision for this possibility in the future.

The division reconsidered the monitoring frequencies. The instantaneous and quarterly monitoring frequencies are practical for established systems or system designs with a proven history in Tennessee. Since this type lagoon is new to Tennessee and will be in start up mode during the initial permit term, the division proposes more frequent effluent monitoring. The frequency may be reduced in subsequent

The Division's determination is to issue a final permit that differs from the draft in the following ways:

- The five-day biochemical oxygen demand (BOD5) limit is reduced from 45 to 10 mg/l, ammonia has been changed from report only to 5 mg/l, and a total nitrogen limitation of 15 mg/l has been added. All of these limitations are daily maximums. The facility has been designed to routinely achieve better concentrations than these on an average basis year-round.
- Monitoring frequencies for chemical parameters and *E. coli* have been increased from once per quarter to once per month.
- A second limitation on *E. coli* has been added to apply in the case of wastewater reuse.
- The monitoring frequency for flow has been increased from once per month to daily.
- Record keeping and reporting requirements have been expanded to include the weather and soils data collected by the automatic irrigation controls.
- Permit language is added to specifically prohibit and require reporting of collection system overflows.
- The division modified the fencing requirement for the spray area to allow the possibility of inhibiting access by natural means (e.g. plants).
- The division added a retest and reporting requirement for when a monthly grab sample yields unexpected value(s).


Edward M. Polk, P.E.
Manager, Permit Section

11/10/04
Date